

*Note on the Probable Disappearance of Two Stars of the 6th Magnitude from the Cluster near B.A.C. 2694.*

By John Tebbutt, Esq.

During my observations of Coggia's Comet it has been my custom to determine the positions of the comparison-stars not identified with reference to others which could be satisfactorily identified. The observations on the evening of the 25th August have resulted in a discovery of the fact that two conspicuous stars of the 6th magnitude, namely, B.A.C. 2686 and 2695, are now invisible, at least in my telescope of  $4\frac{1}{2}$ -inches aperture. I was at first under the impression that the catalogued positions of these two stars were simply errors of observation in north polar distance of the stars 2687 and 2694, the Right Ascension of 2686 differing very slightly from that of 2687, and the Right Ascension of 2695 very slightly from that of 2694. The authorities for the position of 2687 are Taylor, Lacaille, and Brisbane, but the place of 2686 depends on Brisbane alone. It is, however, remarkable that Sir J. Herschel, in his *Catalogue of Nebulae and Clusters observed at the Cape of Good Hope*, records the positions of two stars of the 6th magnitude which agree within a few seconds of arc with the B.A.C. positions of 2686 and 2687. As, however, the positions given by him were derived from two independent sweeps with the reflector, they may be discordant observations of one and the same star. The authorities for the position of 2695 are Taylor and Brisbane, who, according to the B.A. Catalogue, both observed it in north polar distance, the difference of their determination not amounting to more than six seconds of arc. If they both observed it in Right Ascension also, it can hardly be doubted that the star had an existence. Lacaille is silent respecting this star. Several of the stars in this cluster are of a reddish tint. B.A.C. 2694 is decidedly red.

Windsor, N.S. Wales,  
October 22, 1874.

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*Calculations in regard to the Transit of Venus.*

(Extract from a Letter to the President.)

By J. R. Hind, Esq.

The observation of time of second internal contact of *Venus* with Sun at Mount Mokattam, published in the last Number of the *Monthly Notices*, quite confirms the inference in my former letter, which was founded upon an observation at Alexandria. Taking a mean of the two sidereal times of contact at Mokattam or  $13^h 22^m 23^s$ , with the longitude given on the following page by the Astronomer Royal, I find the local mean time  $20^h 11^m 6^s.9$ .

Le Verrier's tables of Sun and Planet, with the semi-diameters for transits recommended in the Introduction to the Tables of *Venus*, give  $20^h\ 11^m\ 12^s\cdot3$ .

Carlini's Sun and Lindenau's *Venus*, with addition of Airy's long inequality of *Venus* and the Earth, and our old semi-diameters (but  $8''\cdot9$  for  $\odot$ 's Hor. Par.) give  $12^h\ 57^m\ 33^s\cdot3$ .

Hence the error of calculation by Le Verrier's Tables is  $= -5^s$ : and that by the Tables of Lindenau and Carlini, with Airy's long inequality,  $= -13^m\ 34^s$ .

Verulam Buildings, Gray's Inn, W.C.  
1875, January 8.

*Observations of Occultations of Stars by the Moon, and of Phenomena of Jupiter's Satellites, made at the Royal Observatory, Greenwich, in the year 1874.*

(Communicated by the Astronomer Royal.)

*Occultations of Stars by the Moon.*

Day of Obs.	Phenomenon.	Telescope.*	Power.	Moon's Limb.	Mean Solar Time of Observation. h m s	Observer.
1874. Jan. 25	Disapp. of 53 Arietis	Altaz.	100	Dark	11 49 27·96	L
27	„ <i>k</i> Tauri	„	„	„	10 41 7·49	E
30	„ <i>c</i> Geminorum	„	„	„	6 4 24·39	A D
Mar. 26	„ $\lambda$ Cancrī	„	„	„	11 47 16·13	E
31	„ 10 Virginis	E. Eq.	140	„	8 27 13·07	C
May 19	„ <i>c</i> Geminorum	Altaz.	100	„	11 30 45·99	C
July 8	Reapp. of 53 Arietis	„	„	„	14 14 48·62	J
17	Disapp. of Piazzi xi. 12	„	„	„	8 52 54·96	C
Oct. 22	„ 27 Piscium	„	„	„	12 7 1·75	L
„	„ 29 Piscium	„	„	„	13 52 56·05	L
Nov. 19	„ 10 Ceti	„	„	„	10 47 59·22	E
Dec. 19	„ $\pi$ Arietis	„	„	„	11 15 19·16	J

\* The clear aperture of the object-glass of the Great Equatoreal is  $12\frac{3}{4}$  inches, of the East Equatoreal 6·7 inches, and of the Altazimuth  $3\frac{3}{4}$  inches.  
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